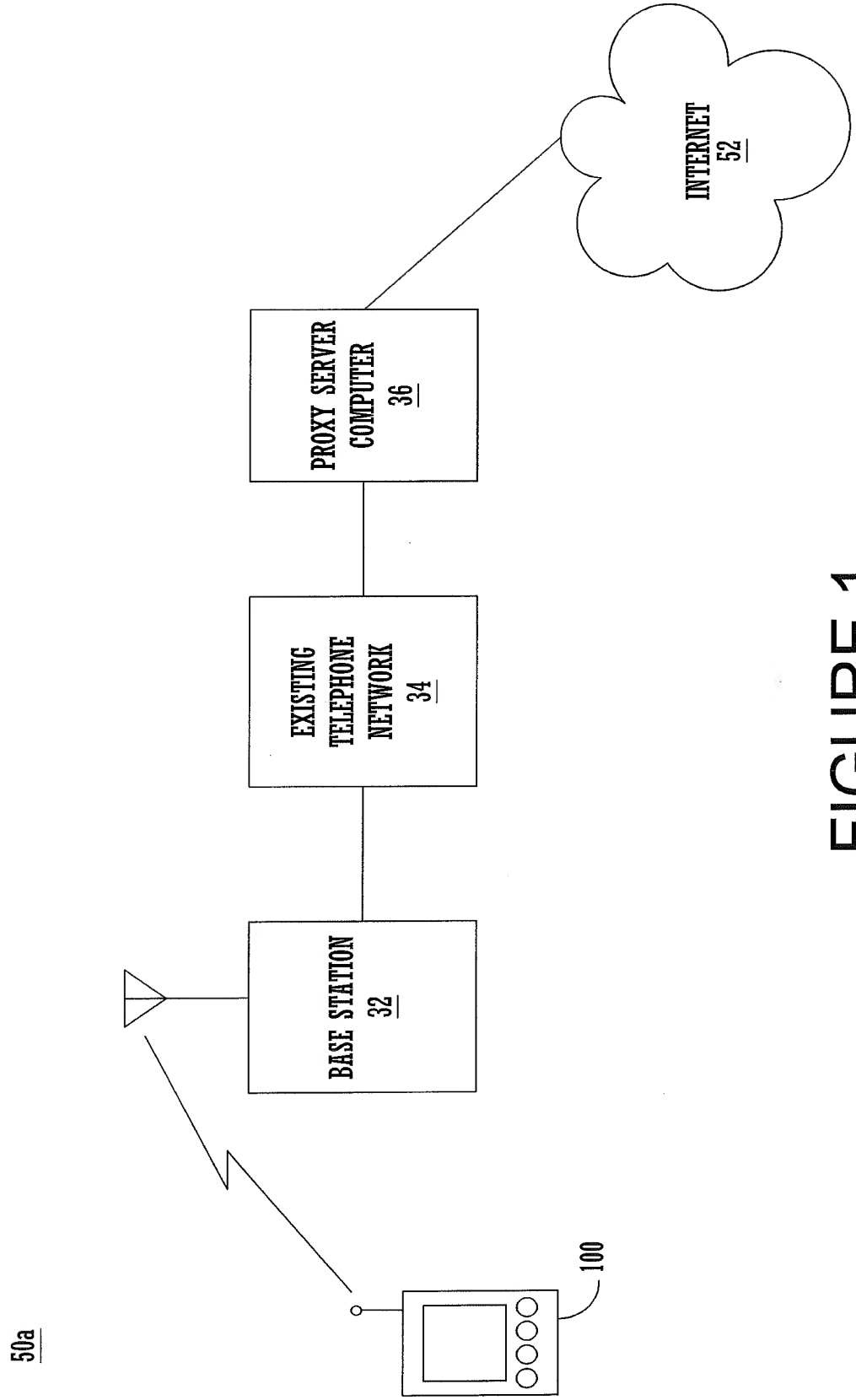
50a
100
BASE STATION
32
EXISTING
TELEPHONE
NETWORK
34
PROXY SERVER
COMPUTER
36
INTERNET
52

FIGURE 1

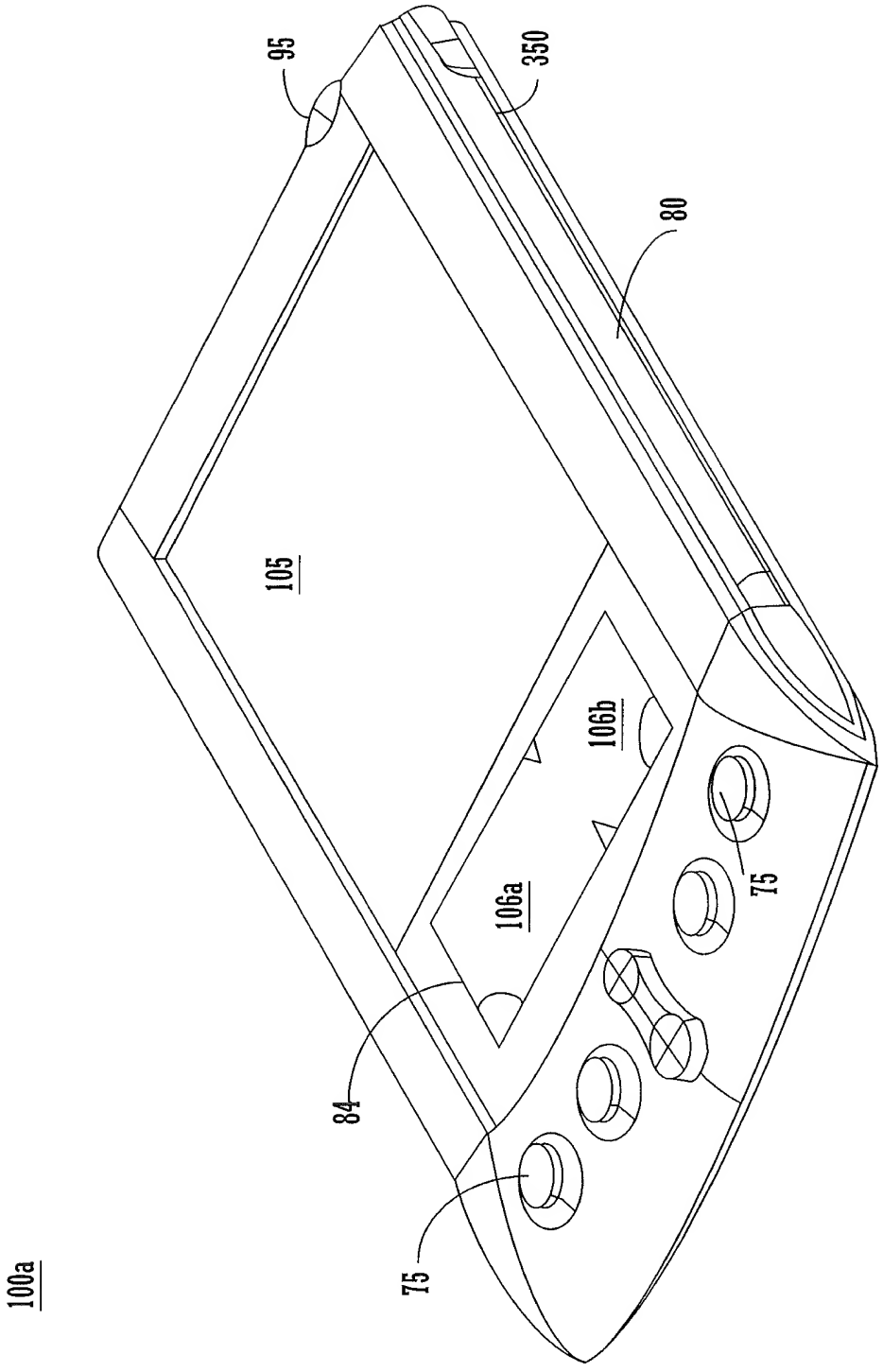

FIGURE 2A

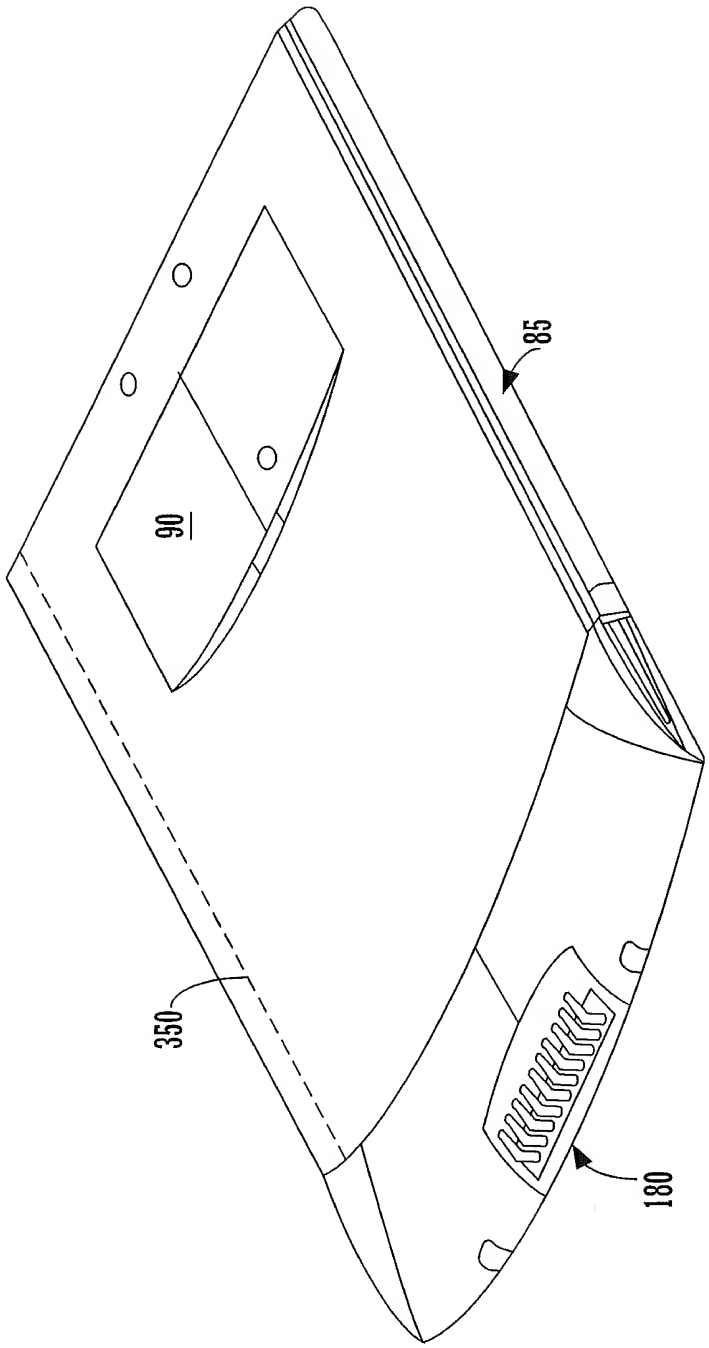

FIGURE 2B

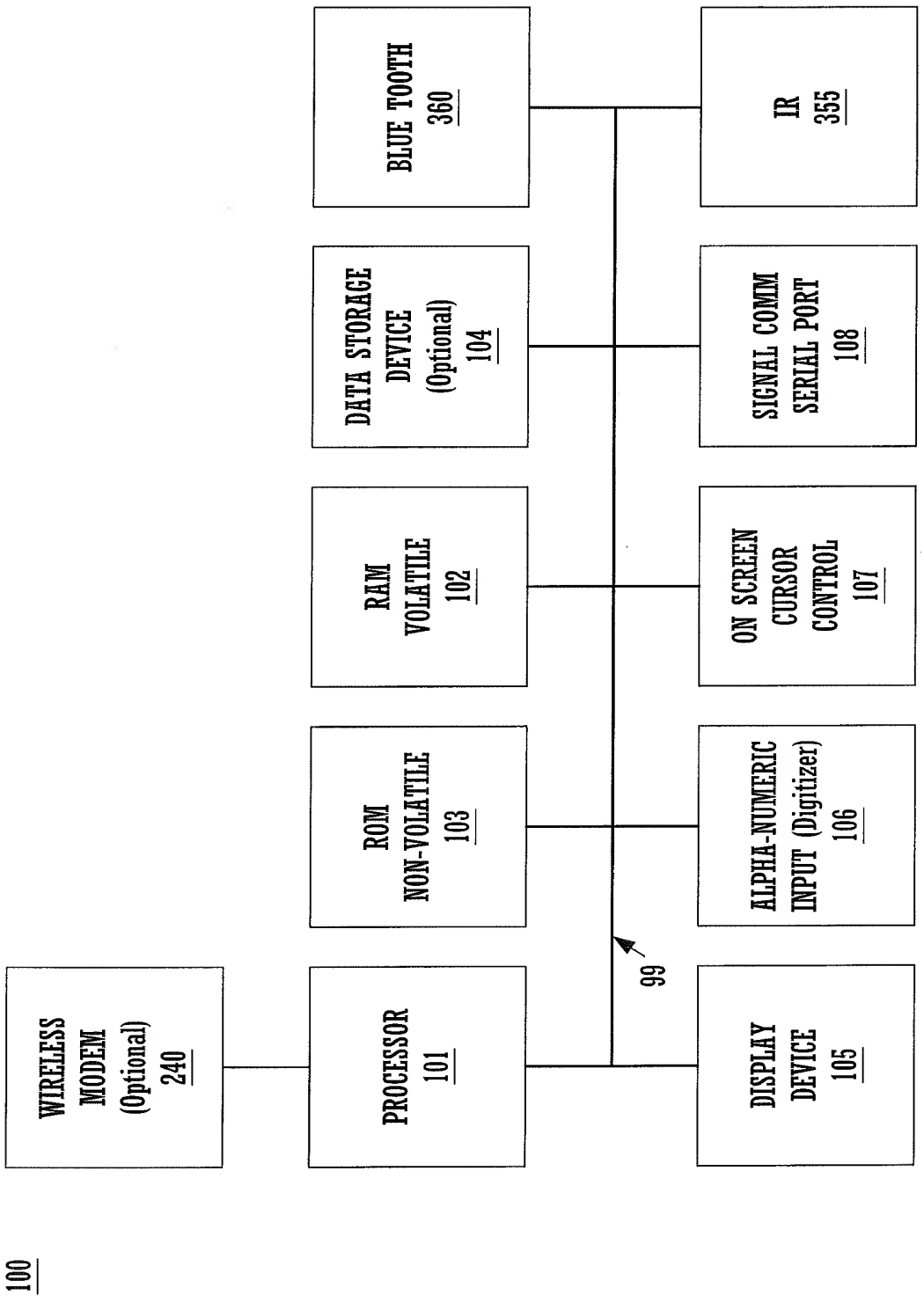
100
WIRELESS MODEM (Optional) 240
PROCESSOR 101
ROM NON-VOLATILE 103
RAM VOLATILE 102
DATA STORAGE DEVICE (Optional) 104
BLUE TOOTH 360
99
DISPLAY DEVICE 105
ALPHA-NUMERIC INPUT (Digitizer) 106
ON SCREEN CURSOR CONTROL 107
SIGNAL COMM SERIAL PORT 108
IR 355

FIGURE 3

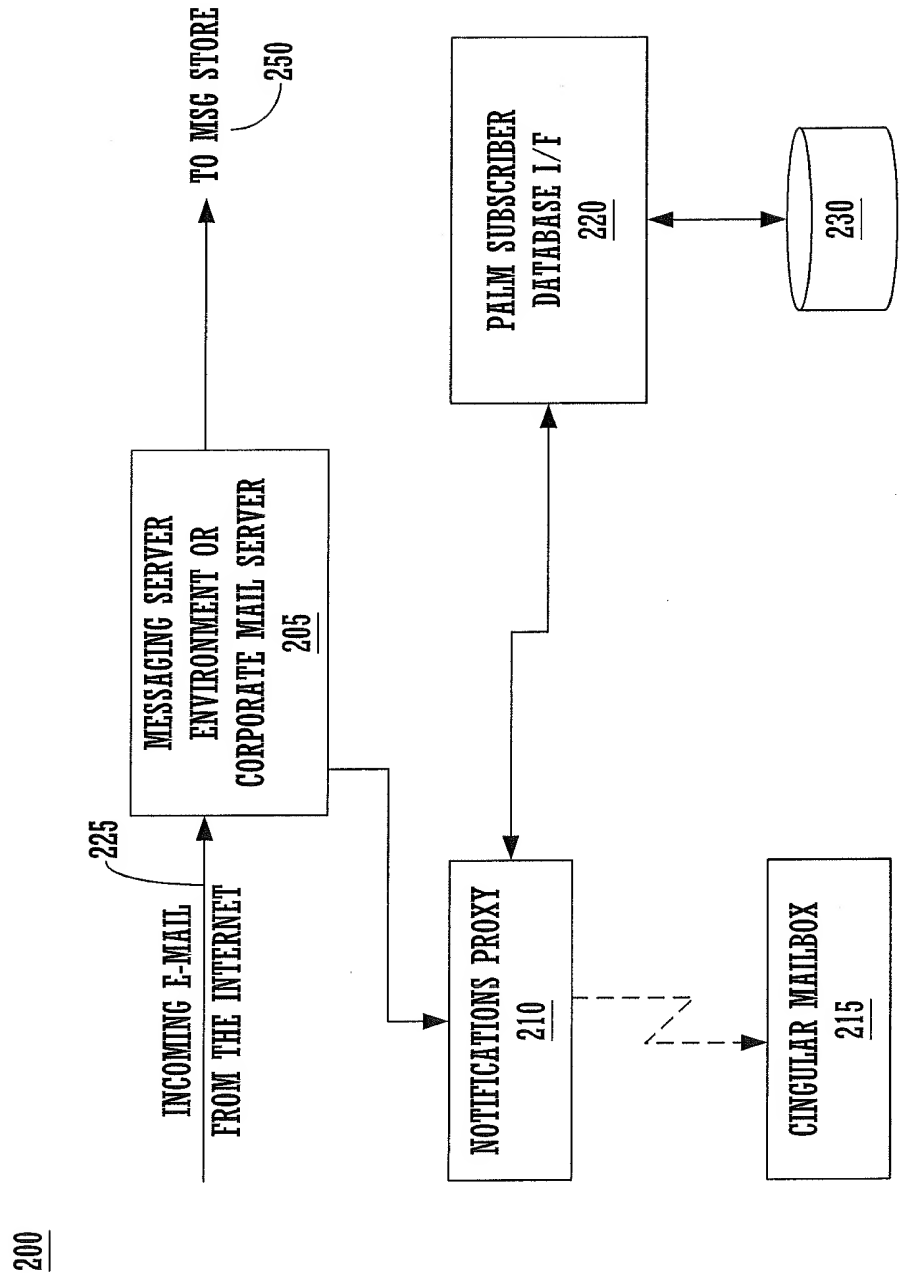
200
INCOMING E-MAIL FROM THE INTERNET
225
MESSAGING SERVER ENVIRONMENT OR CORPORATE MAIL SERVER 205
TO MSG STORE
250
NOTIFICATIONS PROXY 210
PALM SUBSCRIBER DATABASE I/F 220
230
CINGULAR MAILBOX 215

FIGURE 4

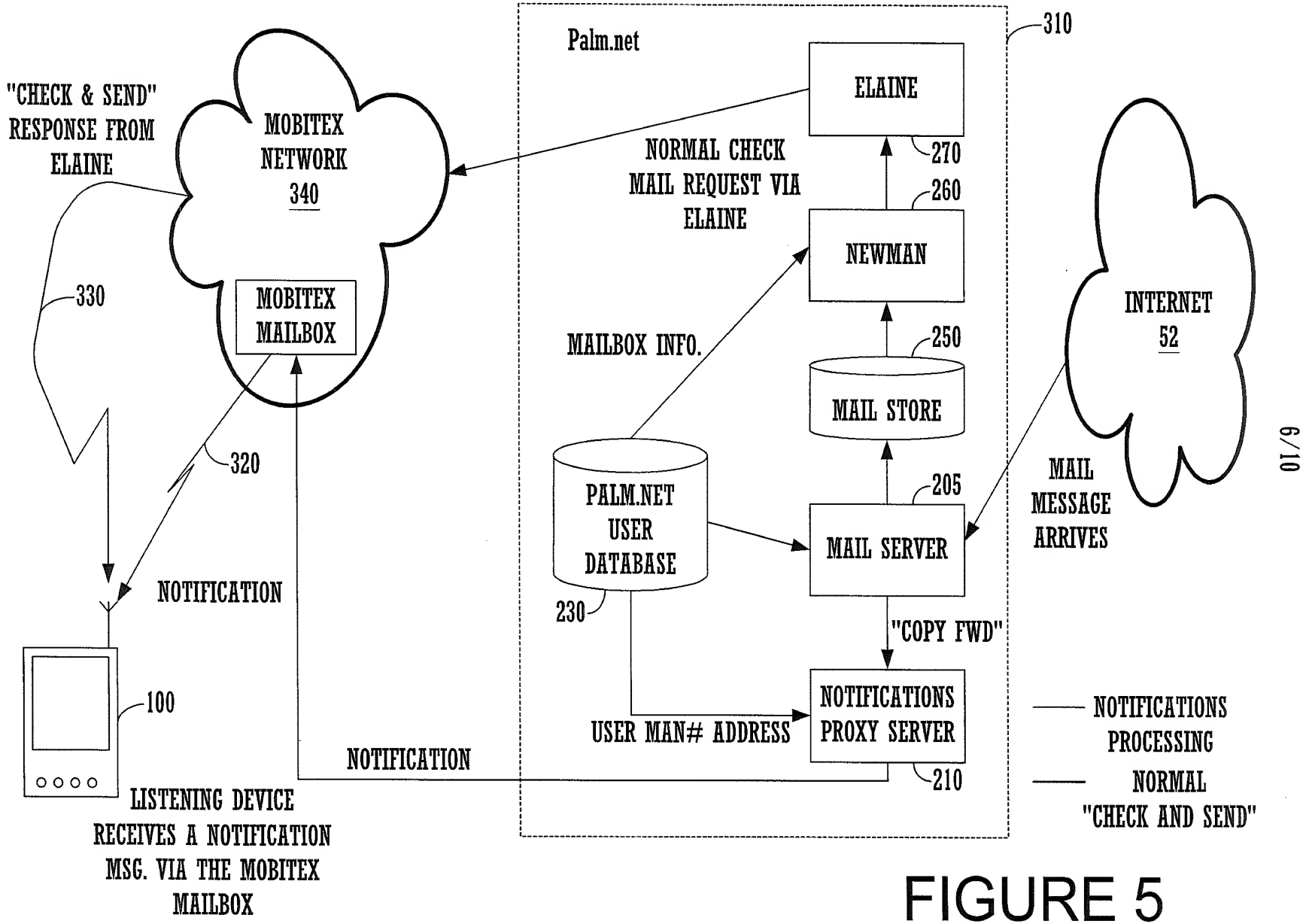
"CHECK & SEND" RESPONSE FROM ELAINE
MOBITEX NETWORK 340
MOBITEX MAILBOX
330
320
NOTIFICATION
100
LISTENING DEVICE RECEIVES A NOTIFICATION MSG. VIA THE MOBITEX MAILBOX
NOTIFICATION
Palm.net
310
ELAINE
270
NORMAL CHECK MAIL REQUEST VIA ELAINE
260
NEWMAN
MAILBOX INFO.
250
MAIL STORE
PALM.NET USER DATABASE
230
205
MAIL SERVER
"COPY FWD"
USER MAN# ADDRESS
NOTIFICATIONS PROXY SERVER
210
INTERNET 52
MAIL MESSAGE ARRIVES
NOTIFICATIONS PROCESSING
NORMAL "CHECK AND SEND"

FIGURE 5

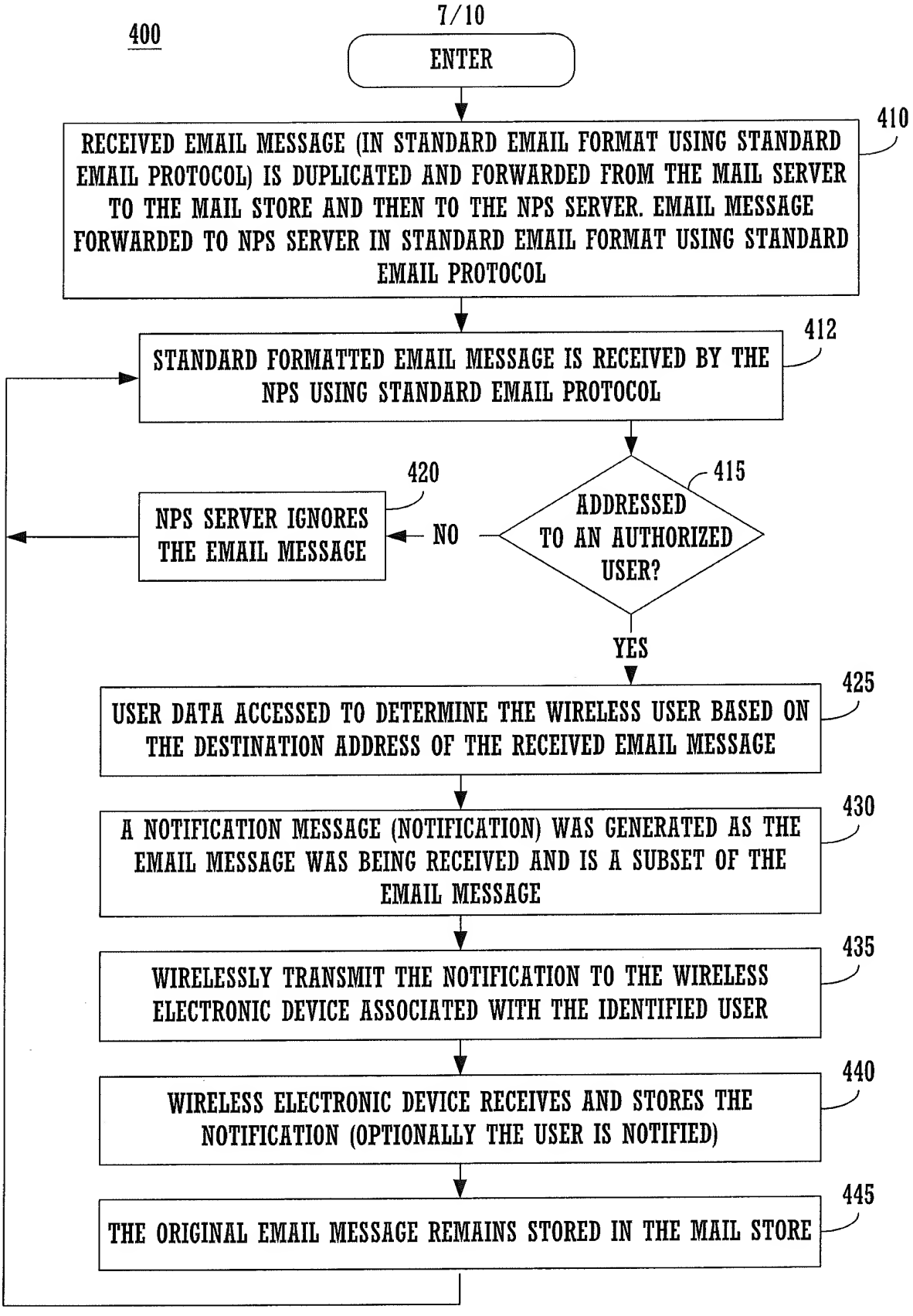
400
ENTER
410
RECEIVED EMAIL MESSAGE (IN STANDARD EMAIL FORMAT USING STANDARD EMAIL PROTOCOL) IS DUPLICATED AND FORWARDED FROM THE MAIL SERVER TO THE MAIL STORE AND THEN TO THE NPS SERVER. EMAIL MESSAGE FORWARDED TO NPS SERVER IN STANDARD EMAIL FORMAT USING STANDARD EMAIL PROTOCOL
412
STANDARD FORMATTED EMAIL MESSAGE IS RECEIVED BY THE NPS USING STANDARD EMAIL PROTOCOL
415
ADDRESSED TO AN AUTHORIZED USER?
NO
420
NPS SERVER IGNORES THE EMAIL MESSAGE
YES
425
USER DATA ACCESSED TO DETERMINE THE WIRELESS USER BASED ON THE DESTINATION ADDRESS OF THE RECEIVED EMAIL MESSAGE
430
A NOTIFICATION MESSAGE (NOTIFICATION) WAS GENERATED AS THE EMAIL MESSAGE WAS BEING RECEIVED AND IS A SUBSET OF THE EMAIL MESSAGE
435
WIRELESSLY TRANSMIT THE NOTIFICATION TO THE WIRELESS ELECTRONIC DEVICE ASSOCIATED WITH THE IDENTIFIED USER
440
WIRELESS ELECTRONIC DEVICE RECEIVES AND STORES THE NOTIFICATION (OPTIONALLY THE USER IS NOTIFIED)
445
THE ORIGINAL EMAIL MESSAGE REMAINS STORED IN THE MAIL STORE

FIGURE 6

450

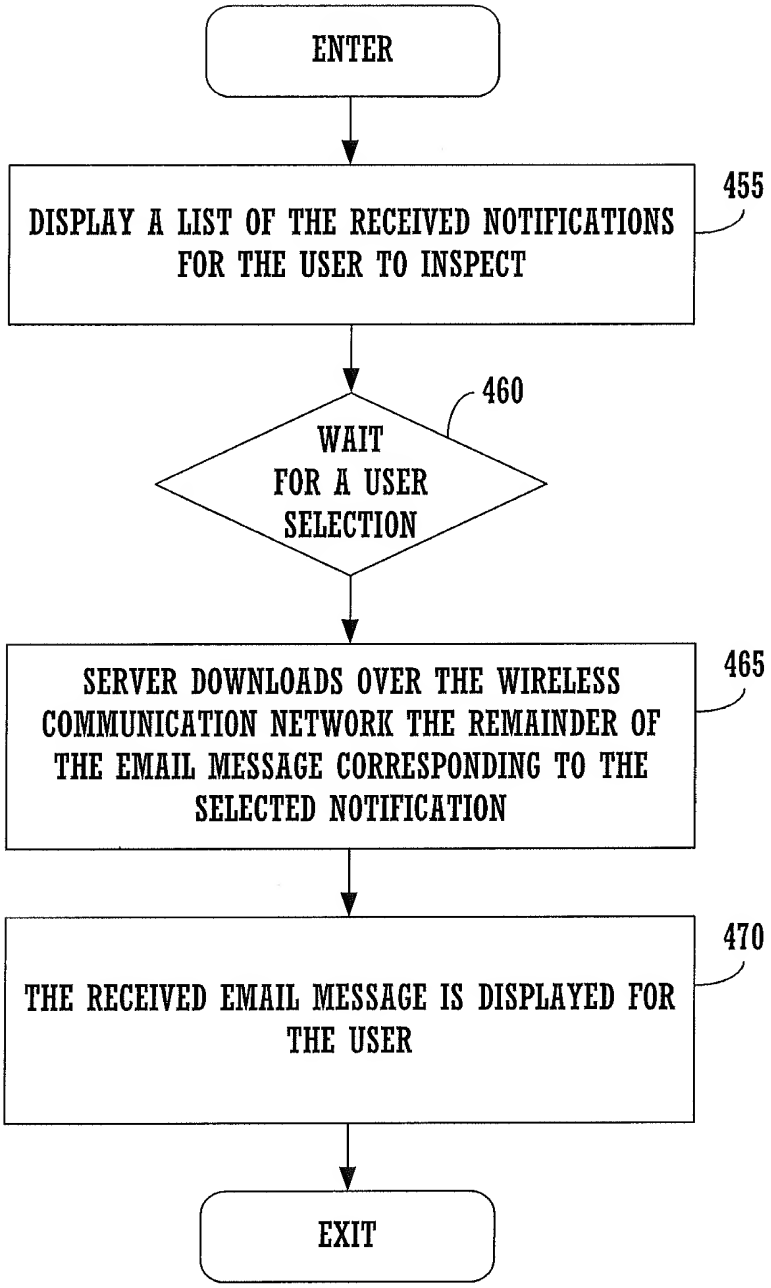
ENTER
DISPLAY A LIST OF THE RECEIVED NOTIFICATIONS FOR THE USER TO INSPECT
455
460
WAIT FOR A USER SELECTION
SERVER DOWNLOADS OVER THE WIRELESS COMMUNICATION NETWORK THE REMAINDER OF THE EMAIL MESSAGE CORRESPONDING TO THE SELECTED NOTIFICATION
465
THE RECEIVED EMAIL MESSAGE IS DISPLAYED FOR THE USER
470
EXIT

FIGURE 7

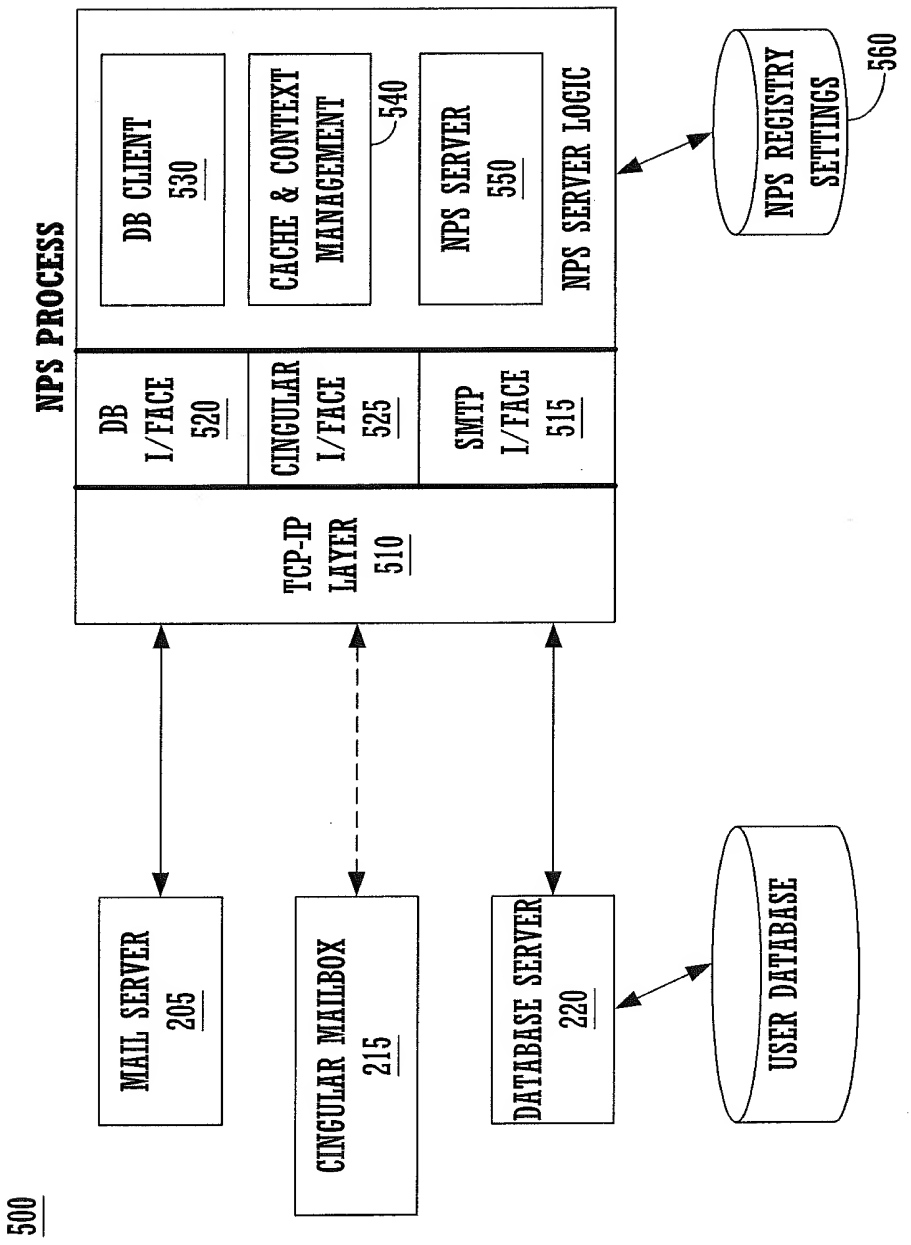
500
NPS PROCESS
DB CLIENT 530
CACHE & CONTEXT MANAGEMENT 540
NPS SERVER 550
NPS SERVER LOGIC
NPS REGISTRY SETTINGS 560
DB I/FACE 520
CINGULAR I/FACE 525
SMTP I/FACE 515
TCP-IP LAYER 510
MAIL SERVER 205
CINGULAR MAILBOX 215
DATABASE SERVER 220
USER DATABASE

FIGURE 8

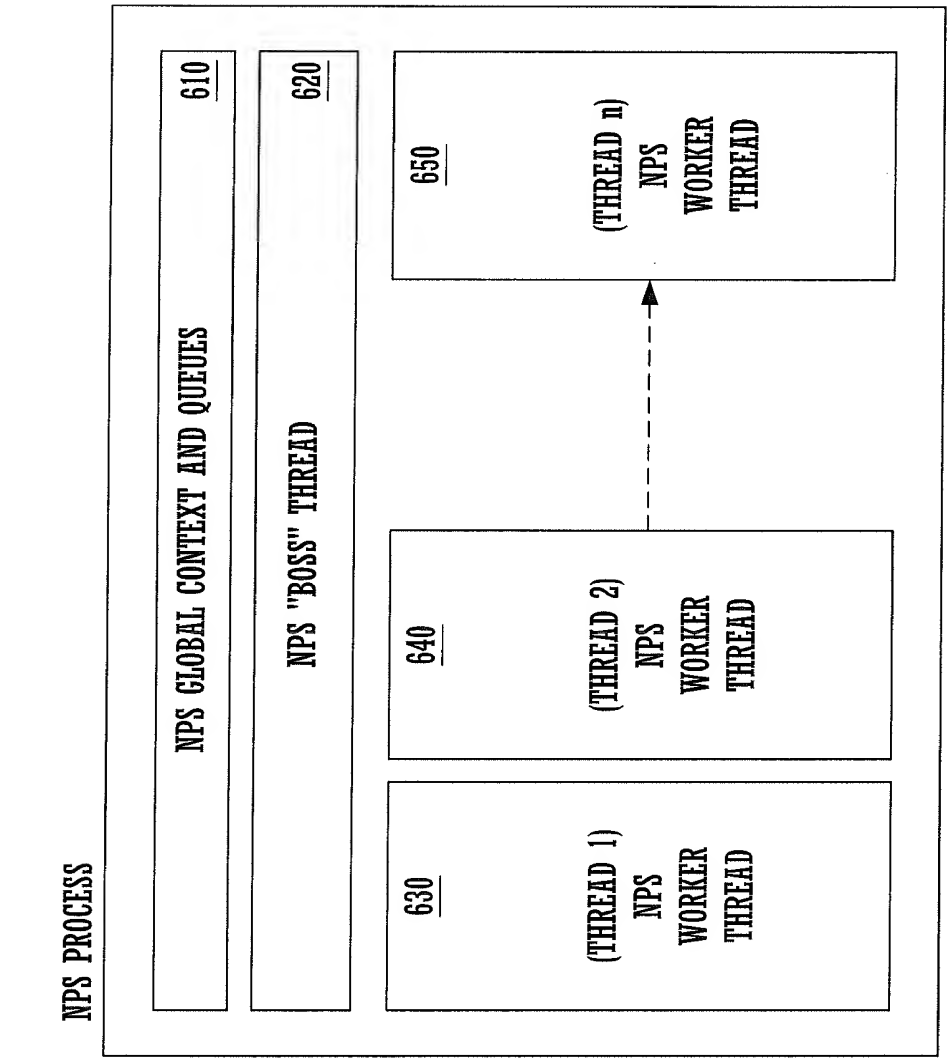
600
NPS PROCESS
NPS GLOBAL CONTEXT AND QUEUES
610
NPS "BOSS" THREAD
620
630
(THREAD 1)
NPS
WORKER
THREAD
640
(THREAD 2)
NPS
WORKER
THREAD
650
(THREAD n)
NPS
WORKER
THREAD

FIGURE 9